

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



REC'D 23 MAY 2005

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Applicant's or agent's file reference PH-18194-PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR2003/002851	International filing date (day/month/year) 26 DECEMBER 2003 (26.12.2003)	Priority date (day/month/year) 15 JANUARY 2003 (15.01.2003)
International Patent Classification (IPC) or national classification and IPC IPC7 H01J 1/30		
Applicant POSTECH FOUNDATION et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	<p>This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>
3.	<p>This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 12 JULY 2004 (12.07.2004)	Date of completion of this report 04 MAY 2005 (04.05.2005)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer AHN, JOON JYUNG Telephone No. 82-42-481-5984 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/002851

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement) under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/002851

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-19	YES
	Claims	None	NO
Inventive step (IS)	Claims	3-19	YES
	Claims	1, 2	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims	None	NO

2. Citations and explanations (Rule 70.7)

1. Reference is made to the following documents:

D1: JP10-199398A (1998.7.31)

D2: US5,148,078A (1992.09.15)

2. Claims 1-2 relate to a FED, comprising a substrate, a cathode layer, a gate insulating layer, a gate electrode layer, an anode insulating layer, emitter, a phosphor and anode.

3. D1 discloses an electron emitting device comprising a substrate, a cathode layer, a resistive layer, a gate insulating layer, a gate electrode layer and emitter. D2 discloses FED comprising a emitter layer(103), an insulating layer(105 and 106), a gate electrode layer(104), an insulator layer(208), and an anode layer.

As mentioned above, the features of Claims 1-2 are already disclosed in D1 and D2 in a similar fields of application, or are included among several straightforward possibilities or combinations from which a skilled person could select without the exercise of inventive skill. Therefore, the subject matters of Claims 1-2 lack an inventive step under PCT Article 33(3).

4. Claims 3-19 involve specific diameter, thickness, extra component or a method for manufacturing a FED with specific materials. Since these teaching are not rendered obvious from the prior art, the subject-matter of claims 3-19 appears to involve an inventive step in the sense of article 33(3) PCT.

5. The subject matters of Claims 1-19 are considered to be novel and industrially applicable under Article 33(2) and 33(4) of the PCT.